CLAIMS

1. A vacuum plenum module of a stencil wiper assembly for wiping and removing excess material from a stencil of a stencil printer, the vacuum plenum module comprising:

a wiper blade to wipe the stencil;

a plenum chamber in fluid communication with the wiper blade, and

a vacuum generator attached to and in fluid communication with the plenum chamber to create a vacuum within the plenum chamber.

2. The vacuum plenum module as claimed in claim 1, further comprising:

means for introducing pressurized fluid into the vacuum generator; and

means for exhausting fluid from the vacuum generator.

3. The vacuum plenum module as claimed in claim 2, wherein the vacuum generator comprises at least one vacuum ejector adapted to create the vacuum.

4. The vacuum plenum module as claimed in claim 1, further comprising:

means for moving the vacuum plenum module between a first position in which the vacuum plenum is spaced away from the stencil and a second position in which the vacuum plenum engages the stencil.

5. A vacuum plenum module of a stencil wiper assembly for wiping and removing excess material from a stencil of a stencil printer, the vacuum plenum module comprising:

a vacuum plenum assembly having a blade portion for wiping the stencil and a plenum chamber; and

a vacuum generator attached to and in fluid communication with the plenum chamber of the vacuum plenum assembly, the vacuum generator being adapted to create a vacuum within the plenum chamber.

6. The vacuum plenum module as claimed in claim 5, wherein the vacuum generator comprises at least one vacuum ejector adapted to create the vacuum.

7. The vacuum plenum module as claimed in claim 6, further comprising an air supply hose in fluid communication between the vacuum generator and an air supply, and an exhaust hose in fluid communication between the vacuum generator and a collection chamber.

8. A stencil printer comprising:

a stencil;

a material applicator to apply material on the stencil; and

a stencil wiper assembly to selectively wipe the stencil, the stencil wiper assembly comprising a vacuum plenum module including

a vacuum plenum assembly having a wiper blade and a plenum chamber, and

a vacuum generator mounted on the plenum chamber of the vacuum plenum assembly and in fluid communication with the plenum chamber.

9. The stencil printer as claimed in claim 8, wherein the vacuum generator comprises a chamber in fluid communication with the plenum chamber and at least one vacuum ejector disposed within the chamber.

10. The stencil printer as claimed in claim 9, further comprising an air supply in fluid communication between the vacuum generator and an air supply, and an exhaust in fluid communication between the vacuum generator and a collection chamber.

11. The stencil printer as claimed in claim 9, wherein the plenum chamber is constructed to define an opening therein and wherein the vacuum generator is mounted to the plenum chamber such that the opening provides fluid communication between the plenum chamber and the chamber of the vacuum generator.

12. The stencil printer as claimed in claim 11, further comprising a seal disposed with the opening of the plenum chamber and the chamber of the vacuum generator to create a seal between the plenum chamber and the chamber of the vacuum generator.

13. The stencil printer as claimed in claim 8, said stencil wiper assembly further comprising:

a supply roller to receive a roll of paper;

a take-up roller to receive used paper; and

a drive to move paper across the stencil between the supply roller and the take-up roller;

wherein the vacuum plenum module is operable to selectively engage the stencil with the paper disposed between the wiper blade and the stencil.

14. A method of cleaning a stencil of a stencil printer comprising a stencil wiper assembly having a vacuum plenum, the method comprising:

loading substrate into the stencil printer;

dispensing material onto the substrate through the stencil;

cleaning the stencil with the vacuum plenum of the stencil wiper assembly; and

generating a vacuum directly at the vacuum plenum to create a vacuum within the vacuum plenum.

15. The method set forth in claim 14 further comprising delivering a pressurized fluid to the vacuum plenum, and manipulating the pressurized fluid to create the vacuum.